SECTION 4 – ENVIRONMENTAL IMPACTS

GENERAL IMPACTS (SECTION 122 OF PUBLIC LAW 91-611)

The proposed project would not adversely affect community cohesion or growth, tax revenues, property values, public facilities or services, regional growth, employment, business and industrial activity, man-made or natural resources; no people or farms would be displaced.

TEMPORARY IMPACTS

General Construction

Temporary increases in noise and a reduction in air quality and aesthetics would be associated with use of construction equipment, however no long term adverse impacts are anticipated.

Environmental Dredging

The discharge channel has accumulated a layer of contaminated sediment that spans about 400 to 500 feet downstream of the unnatural riprap riffle. The need to remove this material is required to reduce the biological oxygen demand (BOD) of the sediment, to increase the dissolved oxygen of the substrata and water, to recreate stream substrate that will support benthic invertebrates and stream fishes, and to remove attractive habitat for non-native and disruptive species such as the common carp (*Cyprinus carpio*), goldfish (*Carassius auratus)*, and round goby (*Neogobius melanostomus*). Removal of contaminated sediments and debris would provide the basis for benthic invertebrates, mussels and fishes to gain access to sustainable substrata. The removal of contaminated sediments would also eliminate bioaccumulation of heavy metals and organic compounds in the local food chain. This measure would remedy contaminated sediments and foreign debris for 730 feet of stream. The existing contaminated sediment is a major barrier to creating a healthy and sustainable environment for a diverse community of invertebrates and fishes.

Minor amounts of turbid water would flow into the Grand Calumet River from the dredging activities. This turbidity may make conditions for local fishes uncomfortable for a short period of time, which would most likely result in the fishes leaving these areas. The settling out of these sediments would not degrade any substrates within the Grand Calumet River since the substrate of the Grand Calumet River is considered to be more contaminated than the sediments in the East Chicago discharge channel.

Threatened and Endangered Species

All vegetation within the project site is to be removed with exception of a few cottonwoods (*Populus deltoides)*. Although black crowned night-heron have been observed foraging along the channel corridor, clearing all vegetation would only temporarily displace them. There is sufficient foraging habitat on the main stem Grand Calumet that would allow the herons to remain in the area. This restoration is necessary to improve foraging and nesting habitat and as well remove contaminants from the food chain in which the herons belong. Through restoring native vegetation such as cattails (*Typha* spp.), the black crown night-heron may eventually nest at the site. Adverse or long-term impacts to black crowned night-heron are not expected. The main benefit derived from this project is an increased, contaminant free foraging area.

STATE OF INDIANA PERMITS

Since the East Chicago Sanitary District discharge channel plant is an unnatural channel with relatively high banks, flow capacity of the channel will remain the same. It has been determined that the restoration

would not limit the capacity of the sanitary district nor having any flooding implications; therefore a permit is not required from the state of Indiana.

A 401-water quality certificate will be applied for through Indiana Department of Environmental Management. It is expected that the permit will be granted.

HUMAN HEALTH RISKS

Human health risks would be reduced through this project. The removal and proper disposal of contaminated sediment would reduce the risk of bioaccumulation through the food chain and eliminate the risk of accidental contact by humans within the project area.

ARCHAEOLOGICAL AND HISTORIC IMPACTS

The proposed project would not affect any archaeological or historic properties; the Indiana state historic preservation officer (SHPO) has been consulted, and is expected to concur with this determination.

SAFETY

There will be no adverse impacts to human safety due to completion of the project, however necessary precautions will be needed to prevent human injury in a construction area. Road blocks or fencing may be needed to prevent residents from entering construction areas, and plywood and markings may be needed to cover holes in the ground when unattended.

ENVIRONMENTAL JUSTICE

Environmental justice is not an issue. The project is entirely on the East Chicago Sanitary District's land and does not require the purchasing or use of low-income residential land. The disposal of the dredged sediment will be dewatered on the Sanitary District's land and finally disposed of at an authorized and licensed landfill, thus not requiring the purchase or use of low-income residential land. The proposed project would not involve adverse human health effects or adverse environmental impacts on minority or low-income populations.

OTHER IMPACTS

The proposed project would have no impact on threatened or endangered species. The project would not disturb any hazardous, toxic, or radioactive waste.